centuri inc.

MANUAL NO. 901-2160

TimePilot©

SERVICE MANUAL

TIME PILOT

CENTURI, INC.
245 W. 74TH PLACE
HIALEAH, FLA. 33014

CUSTOMER SERVICE:
TEL. #(305) 558-5200 (IN FLORIDA)
TEL. #(800) 327-7710 (OUTSIDE FLORIDA)

TELEX: 803694 ANSB CENTURI CABLE: CENTURI

"TIME PILOT"

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USER INFORMATION - F.C.C.

WARNING

THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS.

IT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A COMPUTING DEVICE PURSUANT TO SUBPART J OF PART 15 OF F.C.C. RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE USER AT HIS OWN EXPENSE WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

INTRODUCTION

"T.PILOT" IS A MICROPROCESSOR BASED COIN-OPERATED ELECTRONIC GAME, THAT MAKES EXTENSIVE USE OF DIGITAL INTEGRATED CIRCUITRY AND TELEVISION MONITOR CONCEPTS. THIS MANUAL IS DESIGNED FOR THE USE OF MAINTENANCE TECHICIANS WHO POSSESS A GENERAL WORKING KNOWLEDGE OF SOLID-STATE CIRCUITRY, AND VIDEO MONITOR THEORY. ANY INDIVIDUAL NOT KNOWLEDGEABLE IN THESE AREAS SHOULD NOT ATTEMPT REPAIR OF THE ELECTRONIC PORTIONS OF THE GAME.

IN ADDITION TO THIS MANUAL AND TRAINING IN ELECTRONICS, TROUBLE-SHOOTING AND REPAIR WILL BE FACILITATED BY ACCESS TO GENERAL-TYPE HANDTOOLS, A MULTIMETER, A 50 OR 100 MHZ OSCILLOSCOPE AND A LOGIC PROBE WOULD BE HELPFUL.

TECHNICAL ASSISTANCE IS AVAILABLE BY CALLING (305) 558-5200. QUESTIONS OR COMMENTS CONCERNING "T.PILOT" OR ANY OF OUR GAMES ARE WELCOME AND SHOULD BE DIRECTED TO:

CENTURI, INC.

CUSTOMER SERVICE DEPARTAMENT
#800-327-7710 (OUTSIDE THE STATE OF FLA.)
#305-556-5888 (IN FLORIDA)

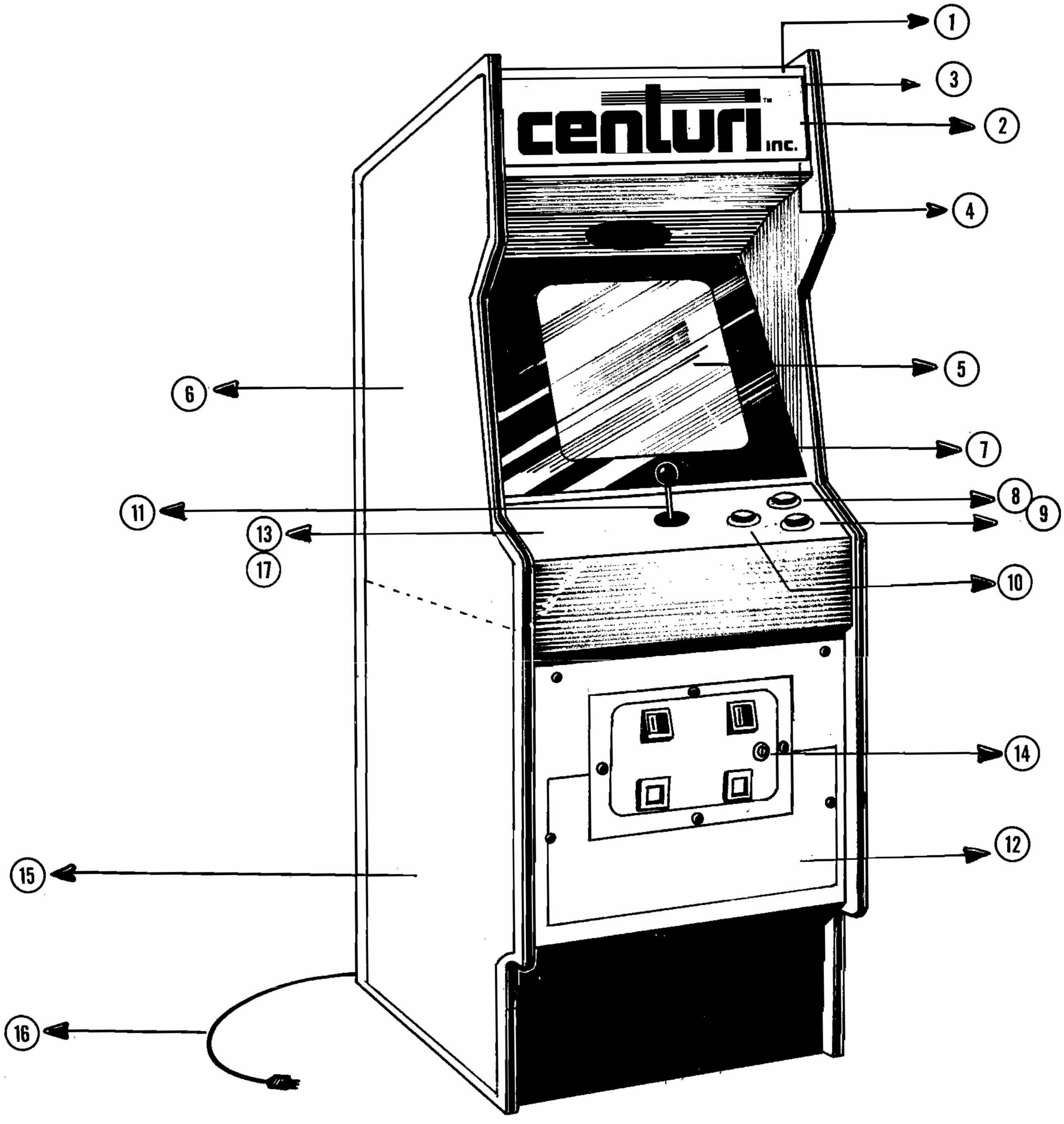
NOTES

NEVER REPLACE ANY COMPONENTS WITH ANYTHING OTHER THAN EXACT REPLACEMENT PARTS.

NEVER REMOVE CIRCUIT BOARD CONNECTIONS WHILE POWER IS ON.

DO NOT REPLACE THE FUSE WITH ANYTHING OTHER THAN THE PROPER VALUE. A BLOWN FUSE INDICATES AN OVERLOAD CONDITION WITHIN THE GAME. REPLACING THE FUSE WITH A HIGHER VALUE CAN CAUSE SEVERE DAMAGE TO INTERNAL COMPONENTS IF AN OVERLOAD OCCURS.

ALWAYS CONSULT THE MANUAL BEFORE ATTEMPTING REPAIRS.



(FIG,1) FRONT VIEW OF CABINET.

"TIME PILOT" CABINET

(FIGURE 1)

PARTS LIST

ITEM	CENTURI P/N:	DESCRIPTION:
1.	302-2592	TOP ANGLE HOLD DOWN BRACKET
2.	802-3105	SILK SCREENED MARQUEE PANEL
3.	803-0960	VINYL TRIM, 7½" LONG
4.	302-2530	GLASS HOLDING BRACKET
5.	605-0957	VIEWING GLASS
6.	801-3075	LEFT TOP DECAL
	801-3077	LEFT BOTTOM DECAL
	801-3076	RIGHT TOP DECAL
	801-3078	RIGHT BOTTOM DECAL
7.	804-3124	SILK SCREENED MONITOR OVERLAY
8.	--------	1-PLAYER START BUTTON
9.	--------	2-PLAYER START BUTTON
10.	--------	FIRE BUTTON
11.	702-1197	8-POSITION JOYSTICK
12.	801-3079	FRONT DECAL
13.	006-4455	CONTROL PANEL WIRED ASS'Y
14.	009-4694	COINCO COIN DOOR
15.	004-4325	WOOD CABINET ASS'Y
16.	008-4722	LINE CORD
17.	801-3080	CONTROL PANEL OVERLAY

"TIME PILOT"

GAME DESCRIPTION

Continuing with its policy of producing high quality games, Centuri, Inc. adds to its successful line, "TIME PILOT."

Centuri incorporates into this game all the elements of sight and sound necessary to attract a player of any skill level.

The player controls his plane with the 8 way joystick and shoots at the enemies using "Fire" button. "TIME PILOT" consists of 5 different rounds of play which are as follows:

ROUND 1:

A.D. 1910 - The age of Biplane

The attackers are biplanes coming from random directions. Enemy plane shoots at your plane and throns, hand grenades when close to you. After 56 biplanes are destroyed, the "Mother-Ship" appears: a giant airballoon shooting at you! Only 7 hits will destroy the "Mother-Ship." During the same stage, one to five parachutes will appear. Dock with them for bonus points.

ROUND 2:

A.D. 1940 - The age of Monoplane

Enemies are: monoplane fighters, middle size bombers and large bomber ("Mother-Ship"). Middle size bombers are aiming constant-ly at your plane! It could be destroyed by 4 hits and awards 1,500 points.

ROUND 3:

A.D. 1970 - The age of Helicopter

Enemies now are helicopters and large one ("Mother-Ship"). As a new level of difficulty, the helicopters are using homing missiles.

ROUND 4:

A.D. 1982 - The age of Jetplane

The enemies are modern jet fighters shooting and launching homing missiles. A modern large jet bomber is the "Mother-Ship." This is one of the most difficult rounds of the game due to increased speed of jet fighters and random direction attacks.

ROUND 5:

A.D. 2001 - The age of U.F.O.

Hard to be reached and very hard to be passed. Great number of U.F.O.'s are attacking from any direction changing their angles of attack and throwing at your plane two types of "Alien Weapons." The stage is fast paced and the "Mother-Ship", a superfortress U.F.O., can not be so easily destroyed.

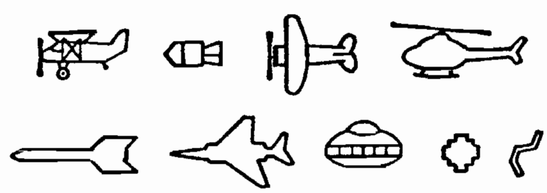
The next, Round 6, is identical with Round 1, but the number of planes attacking you, the speed and number of shots and grenades are gradually increased.

"TIME PILOT" continues with Round 7, 8, ... making your mission harder and harder. The game is all over when all your planes are destroyed.

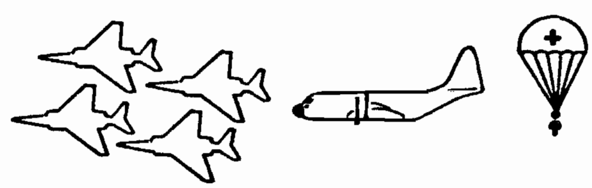
GAME INSTRUCTIONS

1. Control your plane with joystick. Avoid being hit by bullets, bombs and missiles. Do not crash into enemy planes.
2. Advance to next stage by destroying 56 enemies and 7 hits on "Mother Ship."
3. Dock with parachutes for bonus points.
4. Bonus plane after 10,000 points, 60,000 points and each additional 50,000 points.
5. Game over when all your planes are destroyed.

SCORING



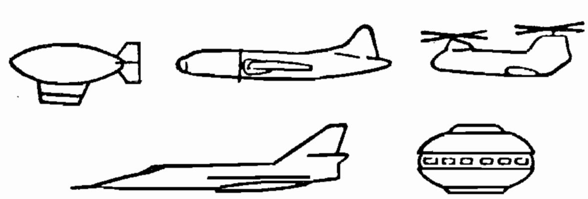
100 PTS. EACH



ENEMY FORMATION 2,000 PTS.

MIDDLE-SIZE BOMBER 1,500 PTS.

PARACHUTIST 1st 1,000 PTS. 2nd 2,000 PTS.... ETC.



MOTHER-SHIPS 3,000 PTS.

DIP SWITCH SETTINGS

The following Dip Switches for the Game "TIME PILOT" are found on the C.P.U. Board. The settings are a guide in selecting optional game format.

DIP 1 SW SET

1 COIN 1 SW SET

SW	1	2	3	4	COIN	PLAY
	OFF	OFF	OFF	OFF	1	1
	ON	OFF	OFF	OFF	1	2
	OFF	ON	OFF	OFF	1	3
	ON	ON	OFF	OFF	1	4
	OFF	OFF	ON	OFF	1	5
	ON	OFF	ON	OFF	1	6
	OFF	ON	ON	OFF	1	7
	ON	ON	ON	OFF	2	1
	OFF	OFF	OFF	ON	2	3
	ON	OFF	OFF	ON	2	5
	OFF	ON	OFF	ON	3	1
	ON	ON	OFF	ON	3	2
	OFF	OFF	ON	ON	3	4
	ON	OFF	ON	ON	4	1
	OFF	ON	ON	ON	4	3
	ON	ON	ON	ON	FREE PLAY	

2 COIN 2 SW SET

SW	5	6	7	8	COIN	PLAY
	OFF	OFF	OFF	OFF	1	1
	ON	OFF	OFF	OFF	1	2
	OFF	ON	OFF	OFF	1	3
	ON	ON	OFF	OFF	1	4
	OFF	OFF	ON	OFF	1	5
	ON	OFF	ON	OFF	1	6
	OFF	ON	ON	OFF	1	7
	ON	ON	ON	OFF	2	1
	OFF	OFF	OFF	ON	2	3
	ON	OFF	OFF	ON	2	5
	OFF	ON	OFF	ON	3	1
	ON	ON	OFF	ON	3	2
	OFF	OFF	ON	ON	3	4
	ON	OFF	ON	ON	4	1
	OFF	ON	ON	ON	4	3
	ON	ON	ON	ON	FREE PLAY	

DIP 2 SW SET

3 THE NUMBER OF PLANES

SW	1	2	NUMBER
O	OFF	OFF	3
	ON	OFF	4
	OFF	ON	5
	ON	ON	256

4 TYPE OF GAME

SW	3	TYPE
	OFF	TABLE
	ON	UP RIGHT

5 BONUS SET

SW	4	BONUS POINT
O	OFF	10,000 Pts. and after every 50,000 Pts.
	ON	20,000 Pts. and after every 60,000 Pts.

6 DIFFICULTY OF THE GAME SET

SW	5	6	7	
	OFF	OFF	OFF	1 (VERY EASY)
	ON	OFF	OFF	2 (EASY)
	OFF	ON	OFF	3
O	ON	ON	OFF	4
	OFF	OFF	ON	5
	ON	OFF	ON	6
	OFF	ON	ON	7 (DIFFICULT)
	ON	ON	ON	8 (VERY DIFFICULT)

7 MUSIC IN ATTRACTIVE MODE

SW	8	MUSIC IN ATTRACTIVE
O	OFF	OFF
	ON	ON

O NORMAL SETTING

INSTALLATION

Your game was shipped from the factory in ready-to-play condition. A brief inspection is suggested before the machine is removed from the carton. If there is damage to the shipping carton, contact the freight carrier for claim purposes. External damage could indicate possible damage to the cabinet and/or electronics components.

After the carton has been satisfactorily inspected, remove the machine from the shipping carton.

Examine the interior of the game for disconnected wires, cables, or harnesses. Make sure the electronic devices are securely mounted in their sockets, etc. Record the game serial number, since it will be required for reference and servicing.

ELECTRICAL REQUIREMENTS

Unless otherwise specified, this game is set to operate at 110 Volts A.C. (See Fig. 2 and 110/220 VAC conversion instructions.)

Power supply chasis schematic information and parts list are included in this manual.

110/220 VAC CONVERSION INSTRUCTIONS

This game contains a harness configuration which allows the machine to be operated from either a 110 VAC or 220 VAC, 50 H_Z or 60 H_Z power source. All games shipped from Centuri, Inc., are in the 220 VAC configuration. To change to the 220 VAC configuration follow the procedure below.

FIRST: Unplug the machine from the wall outlet to completely eliminate shock hazards.

SECOND: Remove the single 3 AMP slow-blow fuse found in the A.C. Distribution Bracket, and install two, 1.5 AMP slow-blow fuses. Next cut the #18 AWG. white jumper at both ends of the fuse holder, and replace the cover.

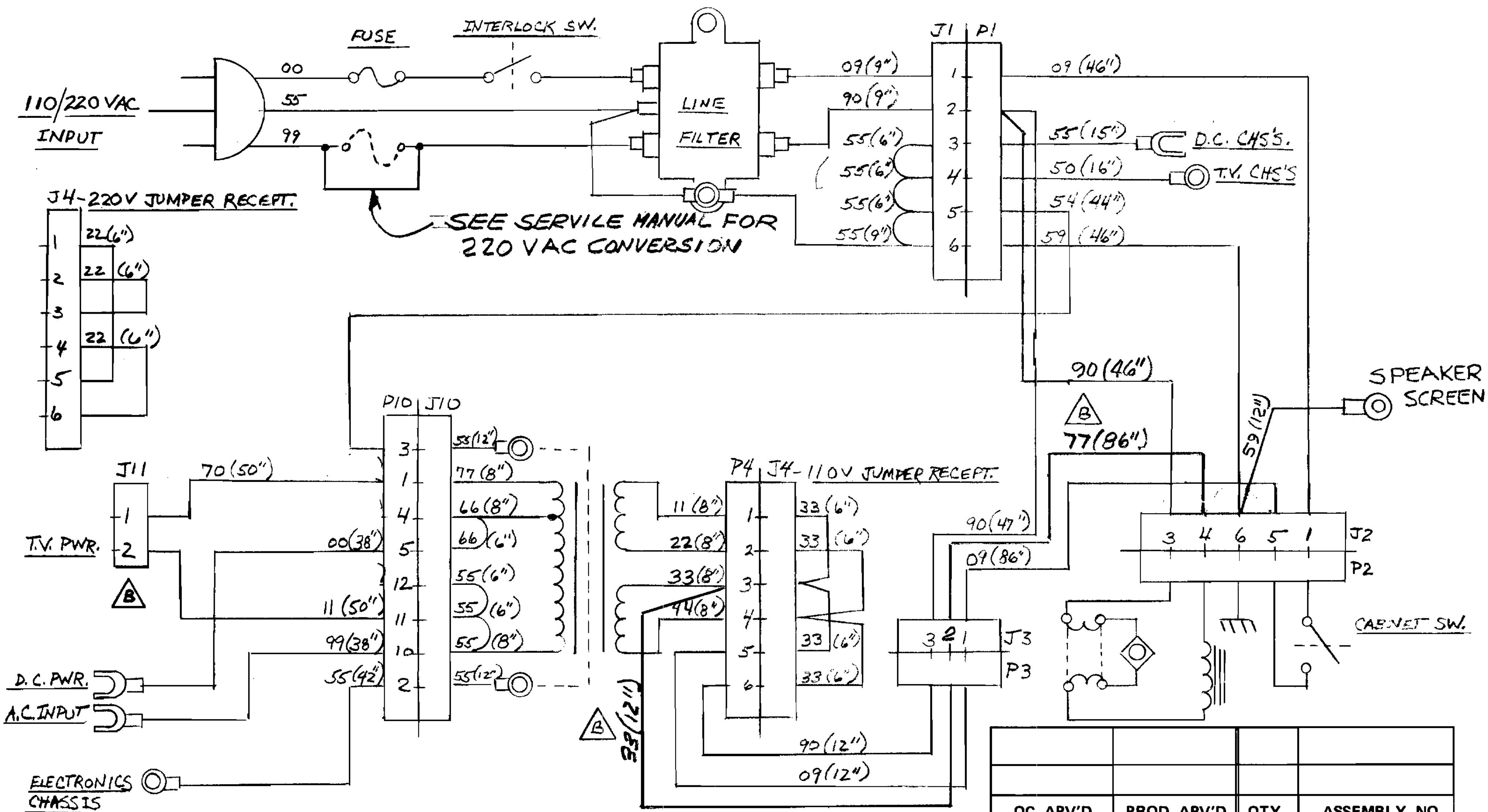
THIRD: On the game power transformer, locate the "orange" jumper plug which is marked, 110 VAC. Unplug the "orange" jumper, and plug in the "red" jumper marked 220 VAC.

To revert back to 110 VAC, replace the components originally removed from the Steps above.

***NOTE: The common side of the A.C. Line must not be fused in the 110 VAC configuration - Replace the #18 AWG., white jumper wire.

(Refer also to FIG. 2, 110/220 POWER INTERCONNECT DIAGRAM, #370-10-0400B)

FI RE 2



QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY
B		DELETED TV POW 3 ADDED WIRE 33(12") & 77(86").	
A			

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME: 110/220V POWER INTERCONNECT DIAG

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D	DATE	SCALE	PART NO.	REV.
VAP	[illegible]	5-8-81		370-10-0400	B

AF 17899A

ROUTINE MAINTENANCE & SERVICE

Because of the solid state electronic circuitry, this machine should require very little maintenance, and only occassional adjustments. However, it is necessary to take steps to insure this.

The volume control is located on the bottom side of the printed circuit board, farthest from the side of the cabinet, and can be accessed through the rear door.

The video monitor has been properly adjusted before shipping. Occassionally minor adjustments are necessary. Technical information, along with schematics, can be found in this manual. Adjustment controls for the monitor are located on the rear of the monitor.

"DO NOT MAKE ANY ADJUSTMENTS ON THIS MACHINE WHILE THE POWER IS ON!" This machine should only be adjusted by a "qualified" technician.

For Service Information, contact:

CENTURI, INC.

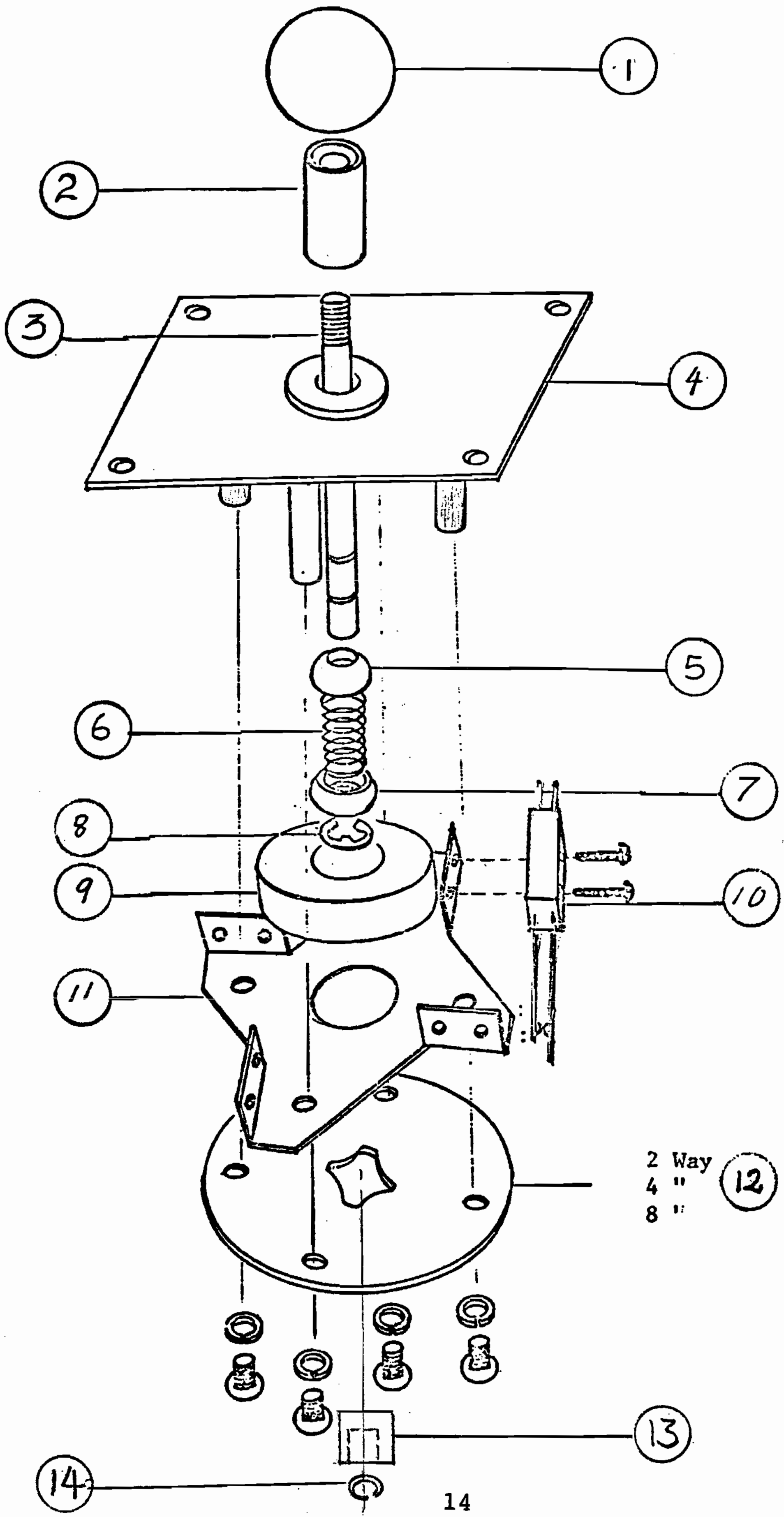
CUSTOMER SERVICE DEPARTMENT
#800-327-7710 (Outside the State of Fla.)
#305-556-5888 (In Florida)

POWER SUPPLY

The Computer Board in this game operates most efficiently and reliably when the power supply is set so the voltage on the Board is 5.0 Volts, ±0.1 Volts. To check this, place a meter across 5 Volts, and ground, at the edge connector. If necessary, adjust the screwdriver control on the power supply, so the meter reads between 4.9 and 5.1 Volts.

(FIG.3) EXPLODED VIEW OF JOYSTICK ASS'Y

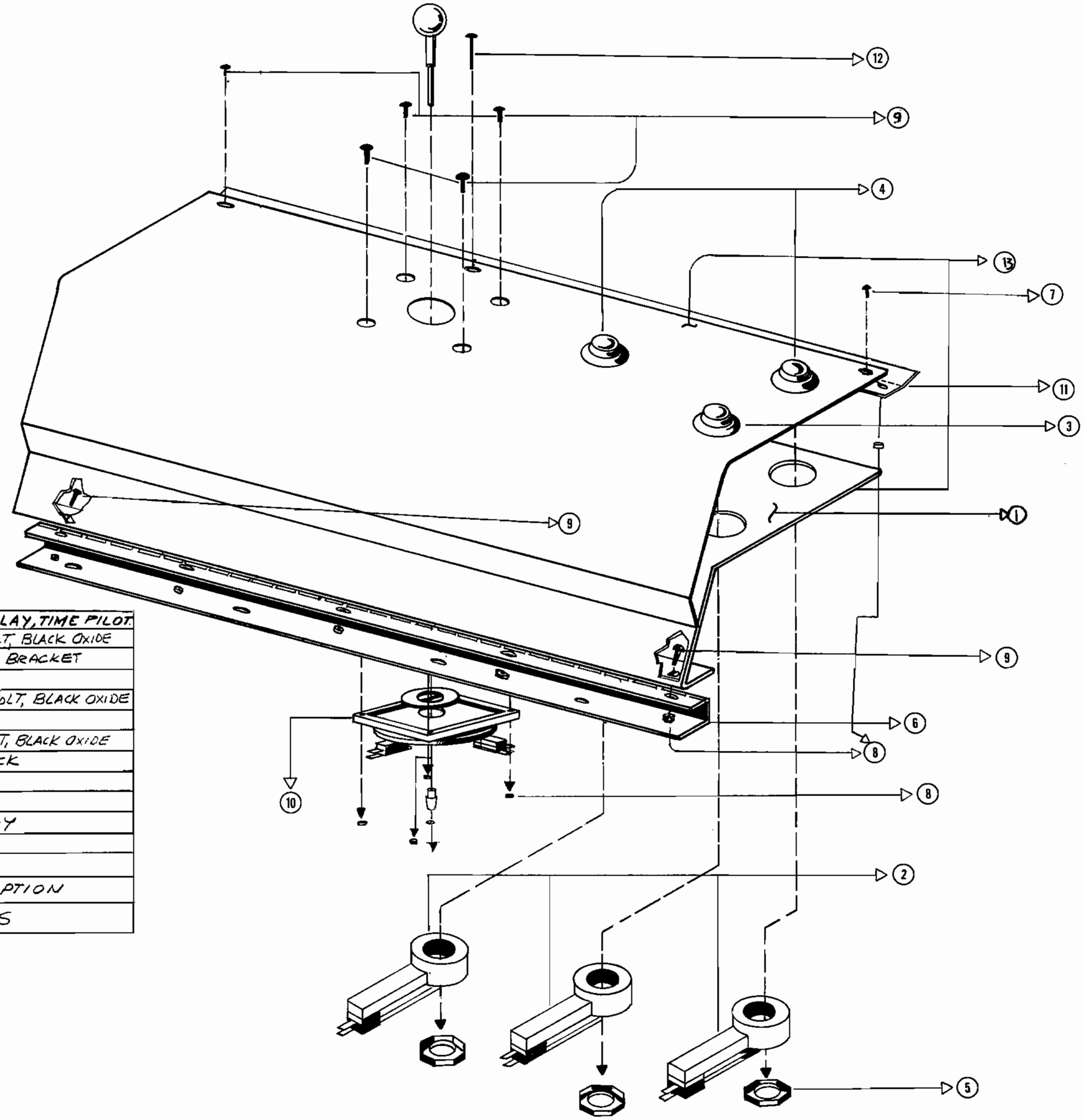
2-4-8 Way JOYSTICK



<u>JOYSTICK 8 WAY MONROE LEAF SW. ASS'Y</u>

<u>PARTS LIST</u>

ITEM	CENTURI P/N:	DESCRIPTION:	QNTY.
1.	409-1183	$1^3/8$" O.D. BALL	1
2.	607-0028	SPACER	1
3.	607-0029	SHAFT	1
4.	409-1186	TOP PLATE WELDING ASS'Y	1
5.	409-1187	TOP BALL	1
6.	409-1188	SPRING	1
7.	409-1189	BOTTOM BALL	1
8.	409-1190	E-RING	1
9.	409-1191	NYLON ACTUATOR	1
10.	409-1182	MOLDED BLADE SW., WICO	4
11.	409-1195	BOTTOM SUPPORT PLATE	1
12.	409-1192	2 WAY FUNCTION PLATE	1
	409-1193	4 WAY FUNCTION PLATE	1
	409-1194	8 WAY FUNCTION PLATE	1
13.	702-1199	ROLLER	1
14.	702-1200	C- RING	1



CONTROL PANEL

ITEM	QTY	PART Nº	DESCRIPTION
13	1	801-3080	CONTROL PANEL OVERLAY, TIME PILOT
12	2	111-2326	#10-24 x 1¾ CARRIAGE BOLT, BLACK OXIDE
11	1	302-2585	DECK & GLASS ANGLE BRACKET
10	1	702-1197	JOYSTICK, 8 POSITION
9	5	111-2323	#10-24x¾ CARRIAGE BOLT, BLACK OXIDE
8	14	115-2384	#10-24 KEP NUT
7	6	111-2322	#10-24x½ CARRIAGE BOLT, BLACK OXIDE
6	1	306-2661	HINGE, CONTROL DECK
5	3	103-0951	PAL NUT
4	2	701-1171	RED BUTTON ASS'Y
3	1	701-1170	WHITE BUTTON ASS'Y
2	3	409-1163	SWITCH & BRACKET
1	1	301-2518	CONTROL PANEL

BILL OF MATERIALS

(FIG,4) EXPLODED VIEW OF CONTROL PANEL ASS'Y.

2800-0 FRONT PLATE EXPLODED VIEW

25¢ COIN

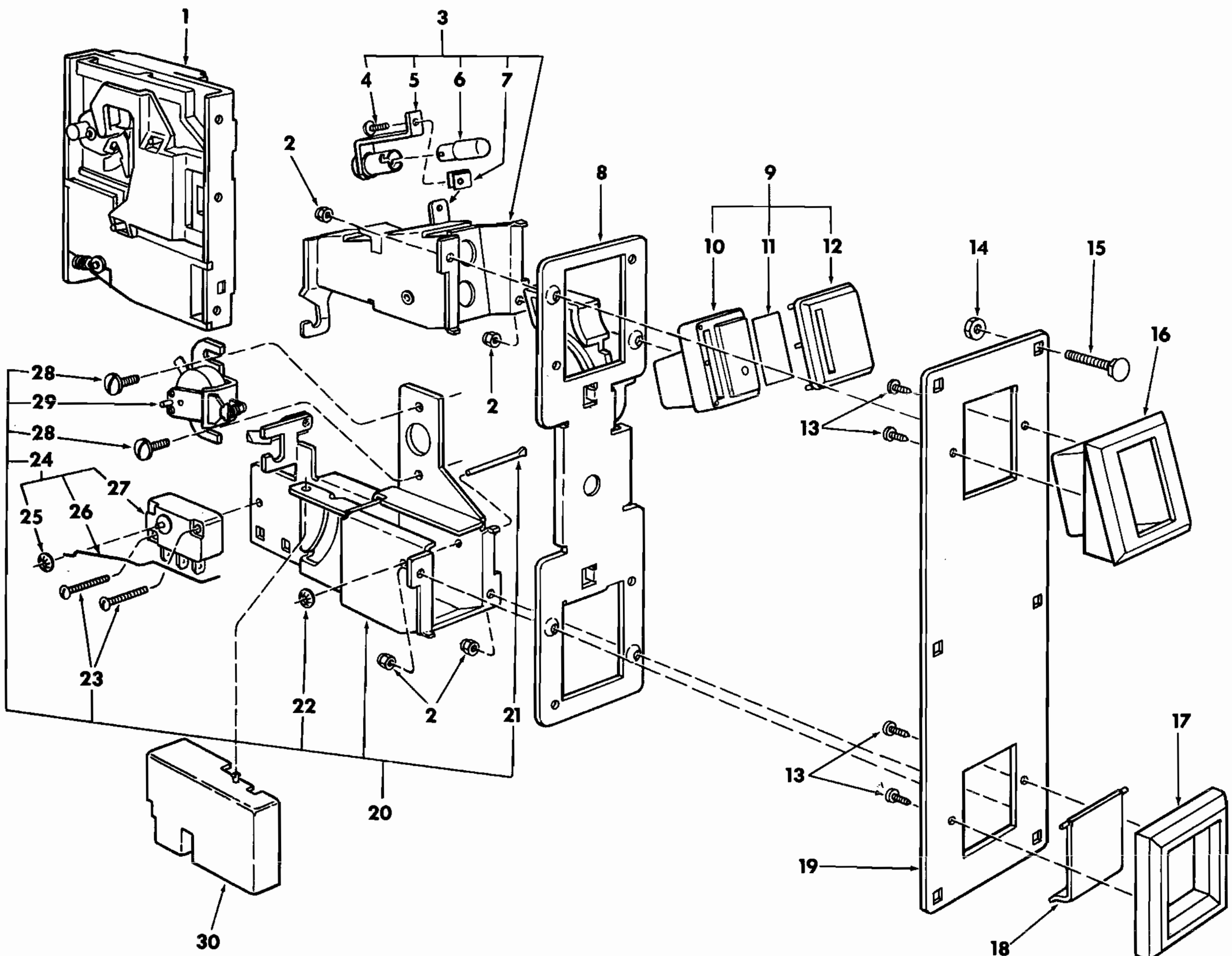


FIGURE 5

Index No.	Part No.	Description
1	5301-10	25¢ Coin Acceptor
2	400-4	#4-40 Self Locking Nut
3	404351	Coin Inlet Chute Assembly
4	110-4-6	4 x 3/8 Screw
5	904717	Lamp Socket
6	904716	#47 Lamp (6.3 Volt)
7	904712	Fastener
8	404464	Inner Panel/Lever Assembly
9	404348	Coin Return Button Assembly
10	904591	Coin Return Button
11	904703	25¢ Price Decal
12	904589-2	Reject Cover Button (25¢)
13	345-4-5	#4 x 5/16 Pan Head Screw
14	406-10	#10-24 Hex Nut (Mounting Hardware)
15	905022	#10-24 x 1-1/8 Carriage Bolt (Mounting Hardware)

Index No.	Part No.	Description
16	904588	Coin Inlet Housing
17	904590	Coin Return Cover
18	904599	Coin Return Door
19	404463	Frontplate Assembly, 3-1/8" x 9-1/4"
20	404350	Coin Return Chute Assembly
21	905115	Bar
22	904936	Keeper
23	100-4-12	4-40 x 3/4 Screw
24	404353	Switch & Wire Assembly
25	900651	Retainer
26	904710-1	Switch Wire-Silver
27	904845	Switch
28	100-6-3	6-32 x 3/16 Screw
29	404354	12 Volt Crem Assembly
30	904762	Switch Cover

2800-0 FRONT PLATE EXPLODED VIEW

(FIGURE 5)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	50270144	5031-10	25¢ COIN ACCEPTOR
5.	50270169	904717	LAMP SOCKET
6.	50270170	904716	#47 LAMP(6.3 VOLT)
8.	50270172	404464	INNER PANEL/LEVER ASS'Y.
10.	50270145	904591	COIN RETURN BUTTON
11.	50270146	904703	25¢ PRICE DECAL
12.	50270147	904589-2	REJECT COVER BUTTON(25¢)
16.	50270149	904588	COIN INLET HOUSING
17.	50270157	904590	COIN RETURN BEZEL
18.	50270150	904599	COIN RETURN DOOR
19.	50270173	404463	FRONTPLATE ASS'Y.($3^1/8$"x9¼")
21.	50270168	905115	BAR
25.	50270141	900651	RETAINER
26.	50270142	904710-1	SWITCH-WIRE, SILVER
27.	50130061	904845	SWITCH
29.	50270165	404354	12 VOLT C.R.E.M. ASS'Y.
30.	50270164	904762	SWITCH COVER

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

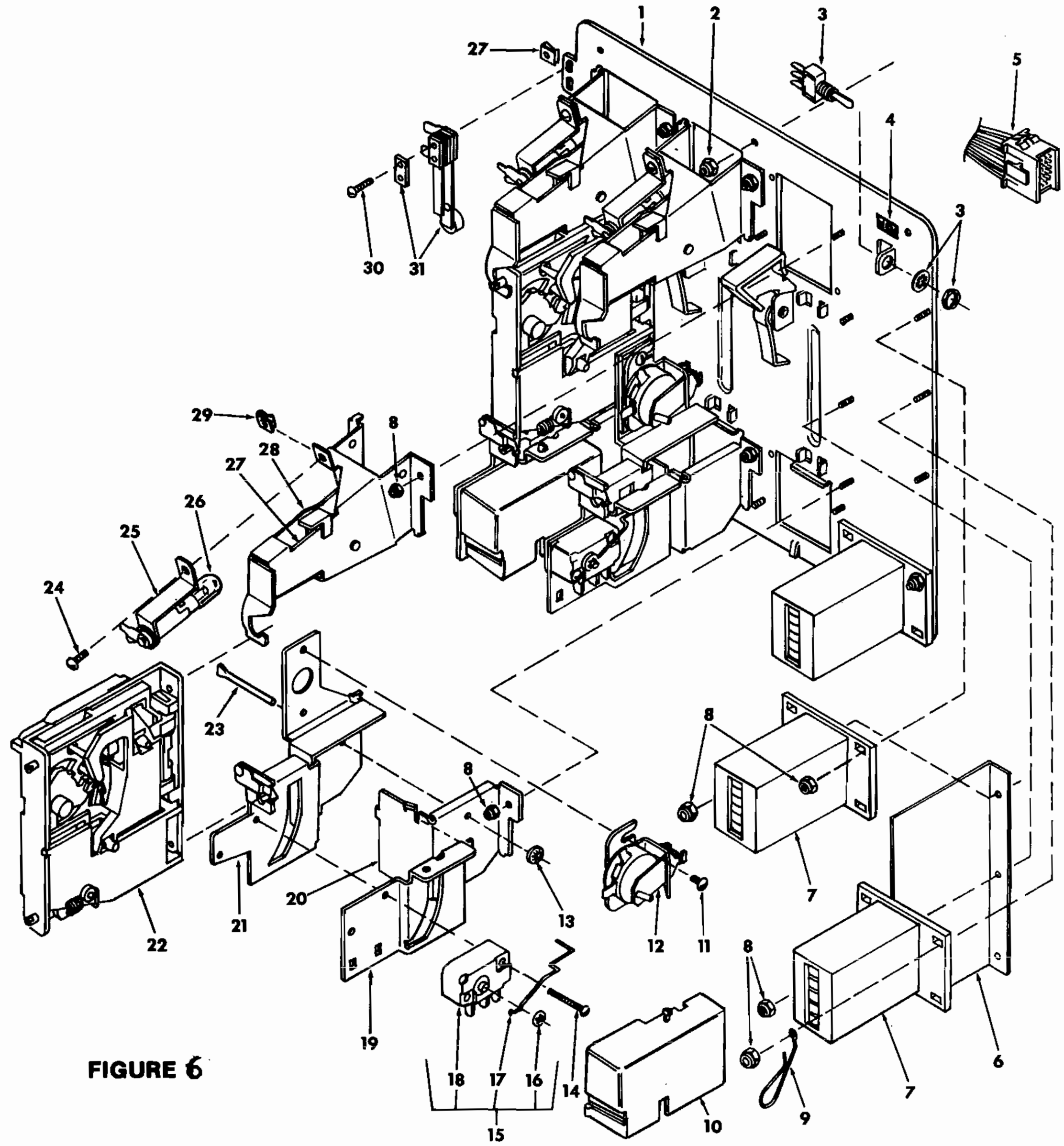


FIGURE 6

Index No.	Part No.	Description
1	404429	Inner Panel With Levers Sub-Assembly
2	400-8	Nut
3	904782	Toggle Switch
4	904706	Test Switch Decal
5		Custom Harness Assembly
6	904822	Insulation
7	404352	Coin Counter Assembly (6 Volt D.C.)
8	400-4	Nut
9	904722	Wire Key Holder
10	904762	Switch Cover
11	100-6-3	Screw
12	404354	C.R.E.M. Coil Assembly. 12 Volts D.C.
13	904936	Keeper
14	100-4-12	Screw
15	404353	Coin Switch Assembly for U.S. 25¢ Coin
16	900651	Retainer
17	904710-1	Silver Switch Wire — for U.S. 25¢ Coin
18	904845	Switch
19	904701	Coin Chute
20	904598	Coin Return Box
21	404428	Switch and C.R.E.M. Coil Bracket Assembly
22	5301-10	25¢ Acceptor
23	905115	Bar
24	110-4-6	Screw
25	904717	Miniature Bayonet-Base Lamp Socket
26	904716	#47 Lamp (6.3 Volt)
27	404418	Coin Inlet Chute Sub-Assembly
28	904594	Right Half of Coin Inlet Chute
29	904712	"U"-Type Fastener
30	116-4-8	Screw
31	904704	Slam Switch Assembly

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

(FIGURE 6)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	50270160	404429	INNER PANEL w/LEVERS SUBASS'Y.
3.	50130062	904782	TOGGLE SWITCH
4.	50270161	904706	TEST SWITCH DECAL
5.	364-62-1000A	-------	CUSTOM HARNESS ASS'Y.
6.	50270162	904822	INSULATION
7.	50270140	404352	COIN COUNTER ASS'Y.
9.	50270163	904722	WIRE KEY HOLDER
10.	50270164	904762	SWITCH COVER
12.	50270165	404354	C.R.E.M. COIL ASS'Y. (12 VOLT D.C.)
17.	50270142	904710-1	SILVER SWITCH WIRE- FOR 25¢ U.S. COIN
18.	50130061	904845	SWITCH
19.	50270143	904701	COIN CHUTE
20.	50270166	904598	COIN RETURN BOX
21.	50270167	404428	SWITCH & C.R.E.M. COIL BRACKET ASS'Y.
22.	50270144	5301-10	25¢ ACCEPTOR
23.	50270168	905115	BAR
25.	50270169	904717	MINIATURE BAYONET-BASE LAMP SOCKET
26.	50270170	904716	#47 LAMP (6.3 VOLTS)
27.	50270171	404418	COIN INLET CHUTE-SUBASS'Y.
31.	50130063	904707	SLAM SWITCH ASSEMBLY

2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

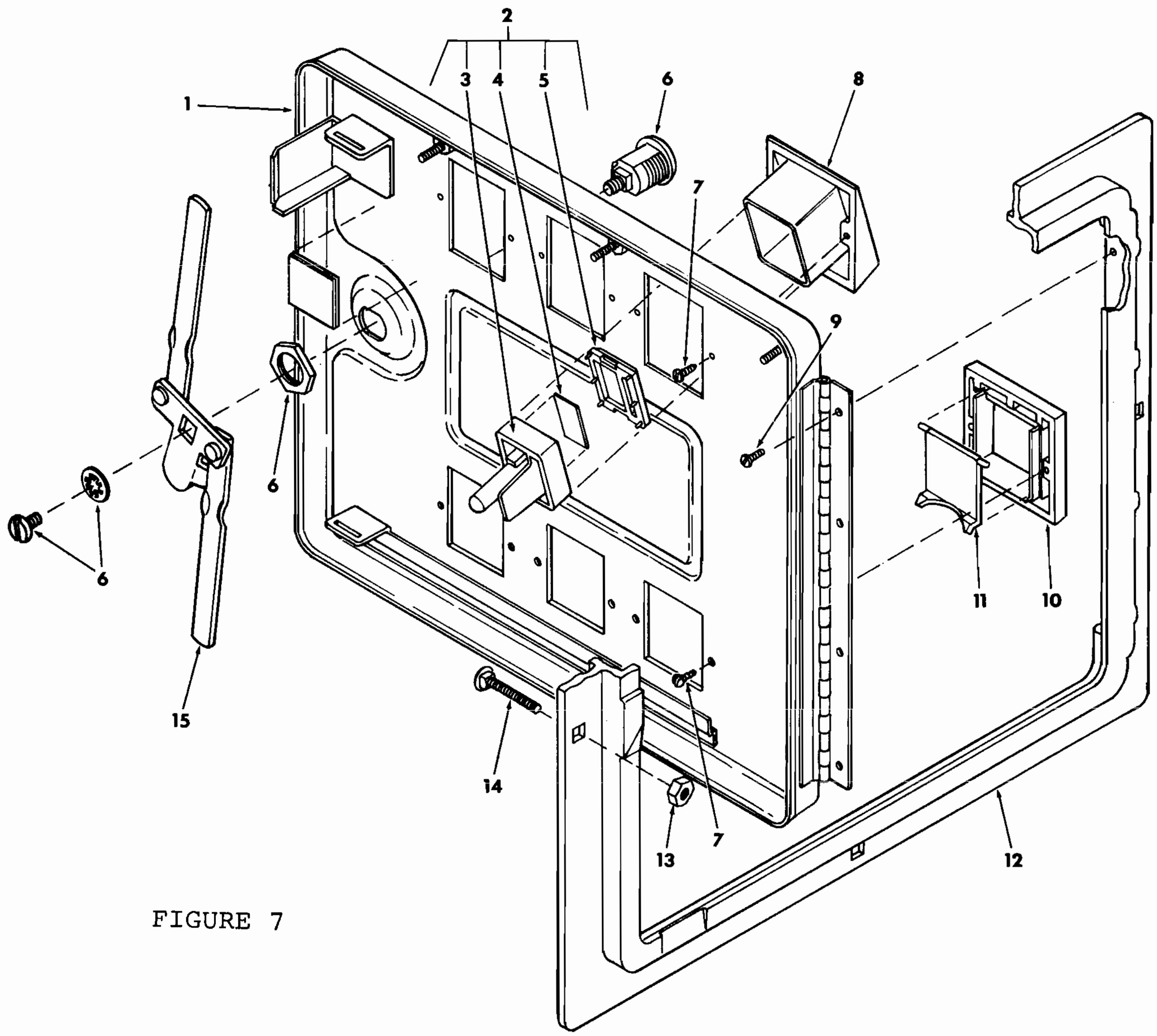


FIGURE 7

Index No.	Part No.	Description
1	404341	Coin Door Only (2 Coin)
	404341-1	Coin Door Only (3 Coin)
2	404348-1	Coin Return Button Assembly for U.S. 25¢ Coin
3	904591	Coin Return Button
4	904703	U.S. 25¢ Price Decal
5	904589-2	Coin Return Button Cover for U.S. 25¢ Coin
6	904707-1	Lock Assembly

Index No.	Part No.	Description
7	345-4-5	Screw
8	904588	Coin Button Housing
9	325-4-4	Screw
10	904590	Coin Return Bezel
11	904599	Coin Return Cover
12	904581	Coin Door Frame, 11-5/8" x 13-3/8" Mounts in a 10-3/8" x 12-3/16" Opening
13	406-416	Hex Nut
14	904734	Carriage Bolt
15	404357	Locking Arm Assembly

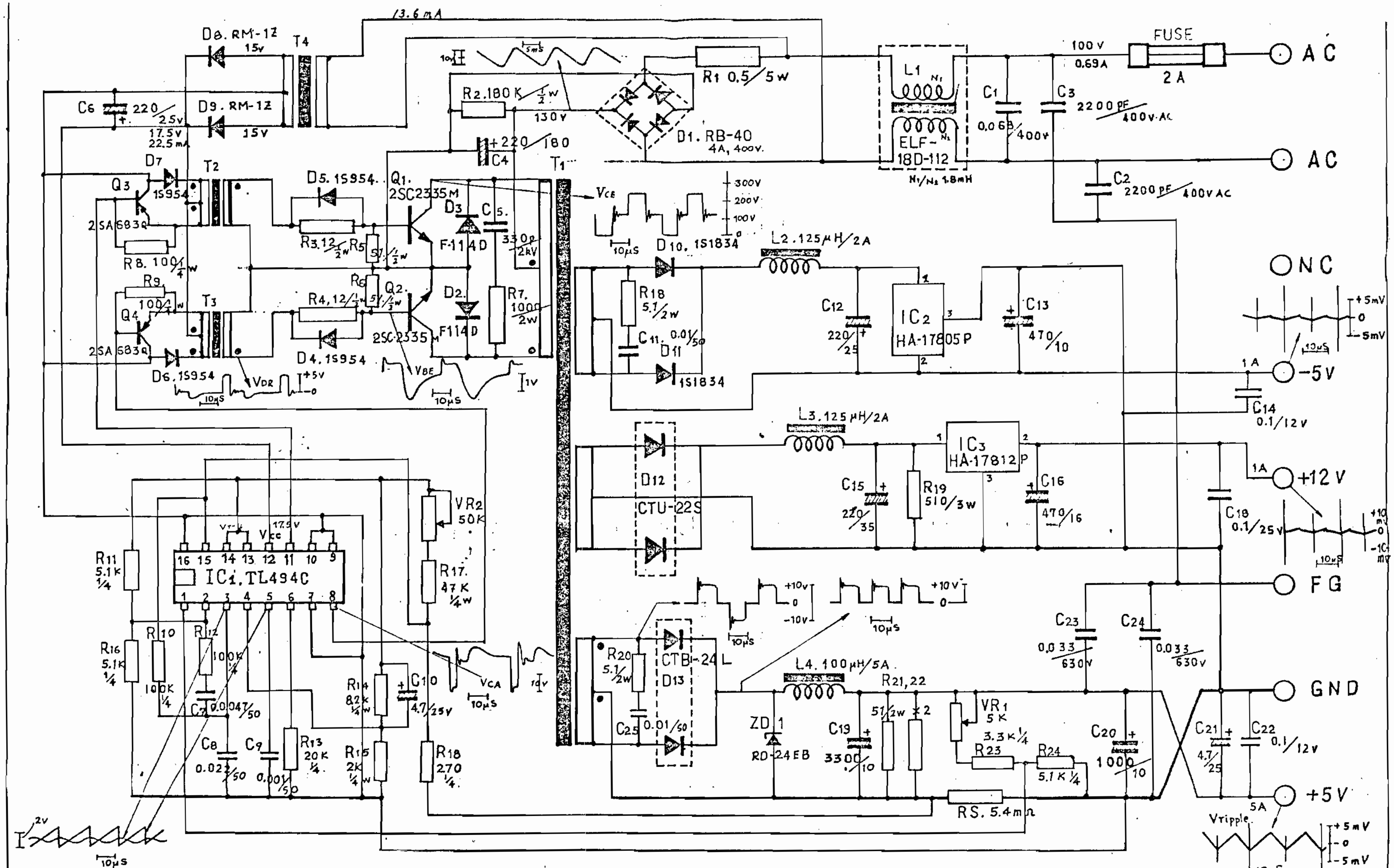
2800 SERIES COIN DOOR EXPLODED VIEW

25¢ U.S. COIN

(FIGURE 7)

PARTS LIST

NO.	CENTURI P/N:	MANUFACTURING P/N:	DESCRIPTION:
1.	50270152	404341	COIN DOOR ONLY(2 COIN)
2.	50270158	404348-1	COIN DOOR BUTTON ASS'Y. FOR U.S. 25¢ COIN
3.	50270145	904591	COIN RETURN BUTTON
4.	50270146	904703	U.S. 25¢ PRICE DECAL
5.	50270147	904589-2	COIN RETURN BUTTON COVER
6.	50270148	904707-1	LOCK ASSEMBLY w/KEYS
8.	50270149	904588	COIN BUTTON HOUSING (INLET HOUSING)
10.	50270157	904590	COIN RETURN BEZEL
11.	50270150	904599	COIN RETURN COVER
12.	50270151	904581	COIN DOOR FRAME (11 5/8"x13 3/8")
15.	50270159	404357	LOCKING ARM ASSEMBLY



PSR-5110 SWITCHING POWER SUPPLY

REV. LET.	ECN NO.	REVISION	BY	TOLERANCES Unless Otherwise Specified	
				FRACTIONS ± 1/32	
				DECIMALS 2 PL ± .015	
				DECIMALS 3 PL ± .005	
				HOLES	
				ANGLES ± 1/2°	

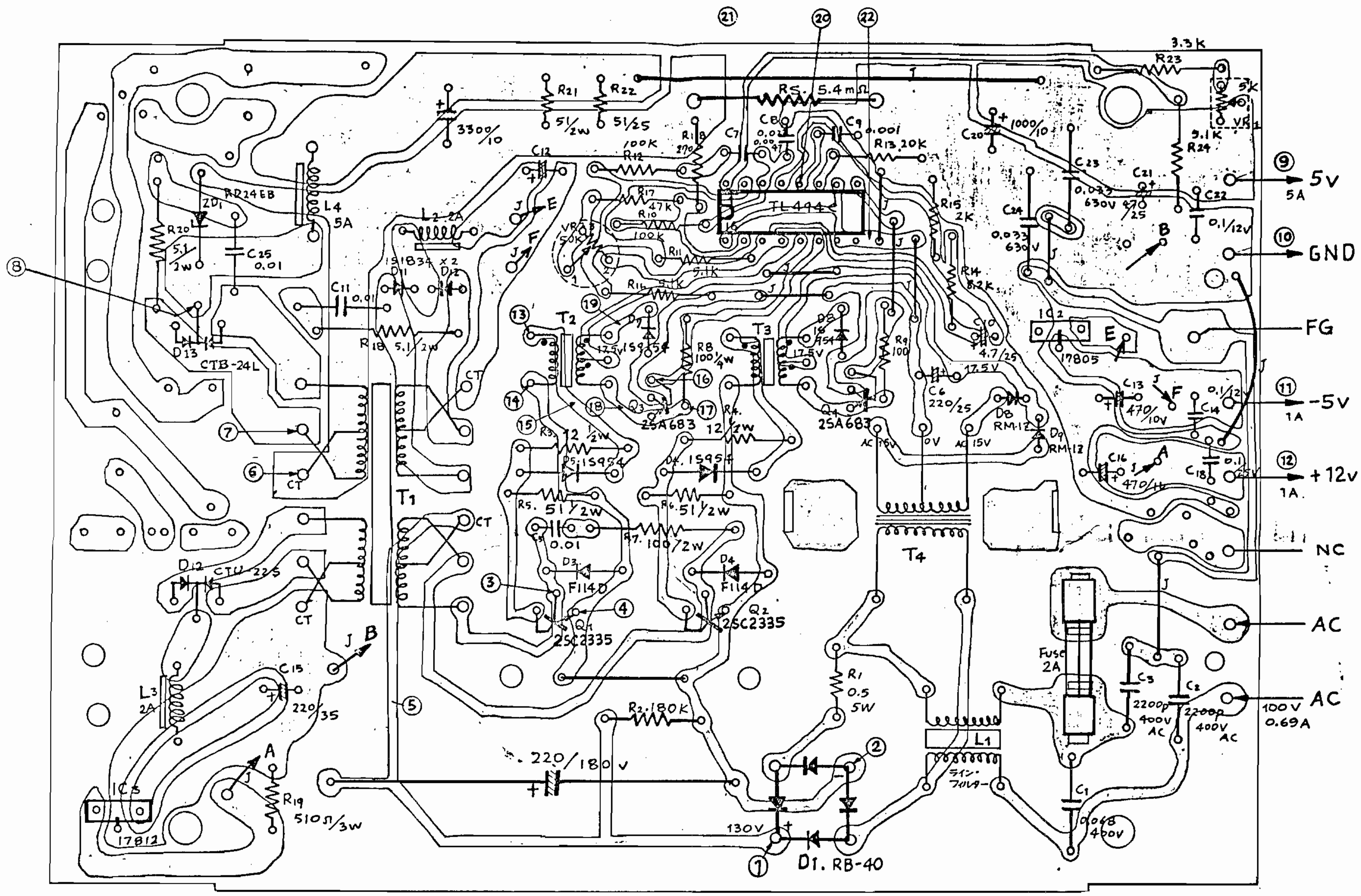
QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	375-01-0206

centurion — HIALEAH, FLORIDA 33014

NAME: #50350006 POWER SUP.

MAT'L | HEAT TREAT. | FINISH

DATE 8-16-3 | SCALE | PART NO. 50350006 | REV.



PSR-5110 SWITCHING POWER SUPPLY

			CENTURI
			#50350006 Power
			SUPPLY
			PAGE 2 of 2

PSR-5110 SWITCHING POWER SUPPLY

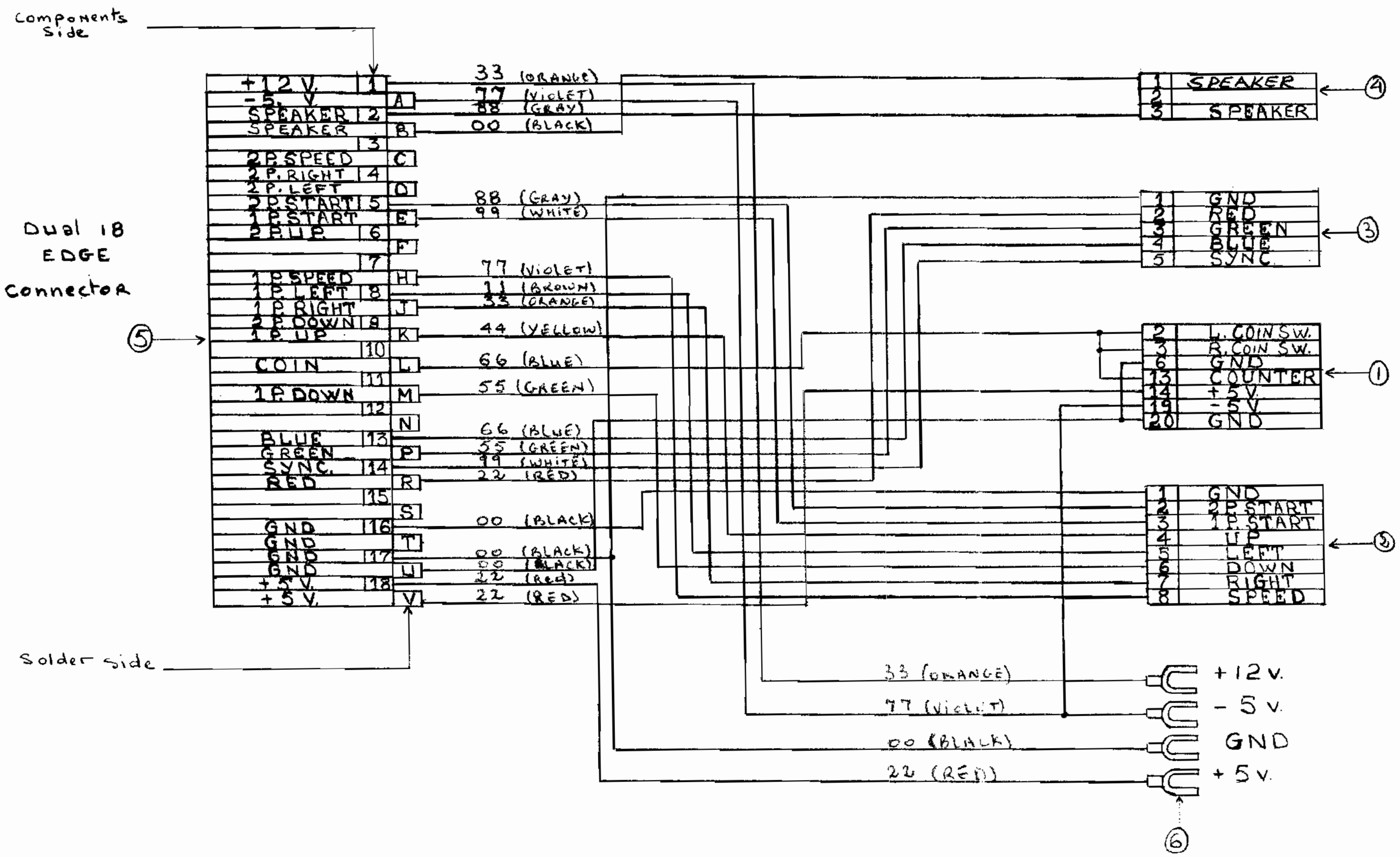
PARTS LIST

SYMBOL:	DESCRIPTION:	QNTY.
D1	STACK DIODE	1
D8, D9	RECTIFIER	2
D2, D3	HIGH SPEED DIODE	2
D4, D5, D6, D7	HIGH SPEED DIODE	4
D13	HIGH SPEED DIODE	1
D12	HIGH SPEED DIODE	1
D10, D11	HIGH SPEED DIODE	2
ZD1	ZENER DIODE	1
Q1, Q2	TRANSISTOR	2
IC1	I.C.	1
IC2	I.C.	1
IC3	I.C.	1
T1	PULSE POWER TRANSFORMER	1
T2, T3	PULSE DRIVE TRANSFORMER	2
T4	BIAS TRANSFORMER	1
L2, L3	R.F. CHOK TRANSFORMER	2
L4	R.F. CHOK TRANSFORMER	1
L1	A.C. LINE FILTER	1
C2, C3	LINE BY-PASS CONDENSER	3
C1, C23, C24	METALIZED POLIESTER CONDENSER	3
C9	MYLAR CONDENSER	1
C7	MYLAR CONDENSER	1
C11, C25	MYLAR CONDENSER	2
C8	MYLAR CONDENSER	1
C5	CERAMIC CONDENSER	1
C14, C18, C24	CERAMIC CONDENSER	3
C10, C21	ELECTROLYTIC CONDENSER	2
C13, C16	ELECTROLYTIC CONDENSER	2
C20	ELECTROLYTIC CONDENSER	1
C19	ELECTROLYTIC CONDENSER	1
C12, C15	ELECTROLYTIC CONDENSER	2
C6	ELECTROLYTIC CONDENSER	1
C4	ELECTROLYTIC CONDENSER	1
R1	CEMENT FUSE RESISTOR	1
R21, R22	METAL RESISTOR	2
R19	METAL RESISTOR	1
R7	METAL RESISTOR	1
R18, R20	METAL RESISTOR	2
R2, R3, R4, R5, R6, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R23, R24	METAL RESISTOR	18
RS	MANGAN WIRE, 5.4M, OHM	1
VR1	SEMI-FIXED RESISTOR	1
VR2	SEMI FIXED RESISTOR	1
F1	FUSE	1
F2	FUSE HOLDER	1
10m/m	NICKEL WIRE, 0.7ø	1
150m/m	TUBE, 1.0ø	1
100m/m	TUBE, 1.5ø	1
J11	LEAD WIRE	1

PSR-5110 SWITCHING POWER SUPPLY

PARTS LIST

SYMBOL:	DESCRIPTION:	QNTY.
J12	LEAD WIRE	1
J13	LEAD WIRE	1
J14	LEAD WIRE	1
	BIND TUBE	3
SM221	MAIN P.C. BOARD	1
	TERMINAL	1
	RATING LABEL	1
	TERMINAL LABEL	1
	BIND SCREW	5
	TRUSS SCREW	8
	TAPPING SCREW	13
	HEX NUT	7
	FLAT WASHER	7
	RECTANGULAR WASHER	6
	SPRING WASHER	7
	MICA WASHER	12
	INSULATION BUSHING	6
	TOP CASE/BOTTOM CASE	2
	FRONT PANEL	1
	REAR PANEL	1
	TERMINAL SUPPORT	1
	HEAT SINK A	1
	HEAT SINK B	1
	HEAT SINK C	1
	HEAT SINK D	1
	METAL HOLDER	4



IT.	QTY	PART Nº	DESCRIPTION
22	18	50270003	TY-wraps 4"
21	85"	50170006	" " WHITE " "
20	110"	50178806	" " GRAY " "
19	100"	50177706	" " VIOLET " "
18	108"	50176606	" " BLUE " "
17	85"	50175506	" " GREEN " "
16	48"	50174406	" " YELLOW " "
15	66"	50173306	" " ORANGE " "
14	81"	50172206	" " RED " "
13	48"	50171106	" " BROWN " "
12	194"	50179906	" " BLACK 22 AWG.
11	18"	50179904	" " BLACK " "
10	18"	50172204	INSUL. WIRE RED 18 AWG.
9	21	50150318	Crimp term. (MOLEX # 08-03-0303)
8	7	50150269	FEMALE PIN (AMP. # 350665-1)
7	15	50150223	FEMALE PIN (MOLEX # 02-09-1116)
6	4	50150293	INSULATED OPEN LUG
5	1	50150295	DUAL 18 EDGE CONN. (MOLEX # 09-50-5[illegible])
4	1	50150231	3 PIN RECEPT. (MOLEX # 03-09-1031)
3	1	50150262	6 PIN RECEPT. (MOLEX # 03-09-1061)
2	1	50150263	12 PIN RECEPT. (MOLEX # 03-09-1125)
1	1	50150268	24 PIN RECEPT. (AMP. # 1-320246-4)

BILL OF MATERIAL

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified

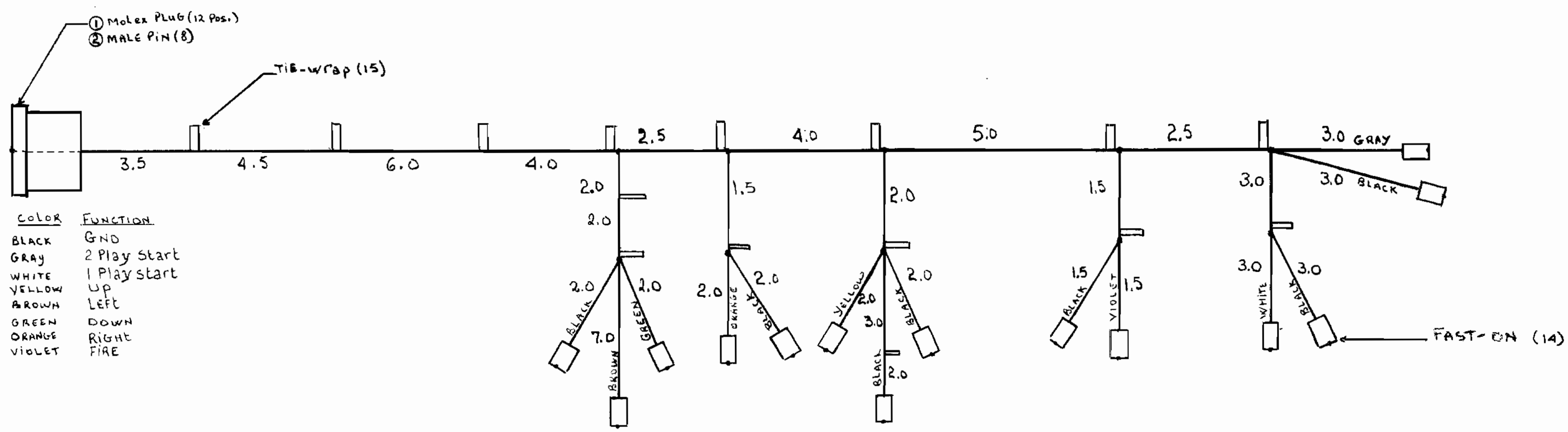
FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 / − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

centuri INC. HIALEAH, FLORIDA 33014

NAME: C.P.U. HARNESS (LOCOMOTION)

MATL'S. | HEAT TREAT. | FINISH

DWN. [signature] | APPD. [signature] | DATE 2/25/82 | SCALE ⊁ | PART NO. 382-12-0100 | REV.



Pos.	Color	Function
1.	BLACK	GND
2.	GRAY	2 Play Start
3.	WHITE	1 Play start
4.	YELLOW	UP
5.	BROWN	LEFT
6.	GREEN	DOWN
7.	ORANGE	RIGHT
8.	VIOLET	FIRE

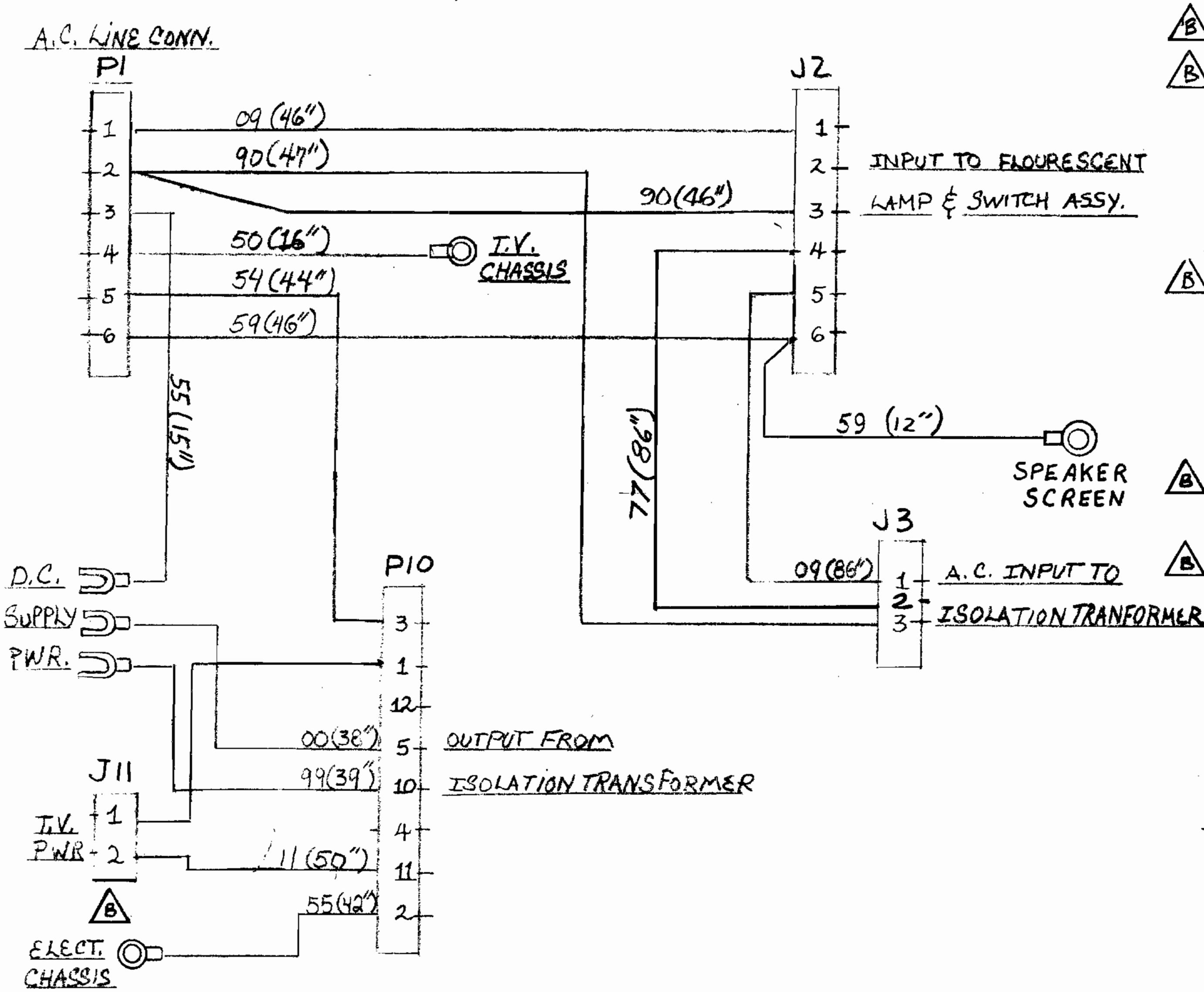
QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES Unless Otherwise Specified		
FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	–	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME CONTROL PANEL HARNESS				
MATL'S.	HEAT TREAT.	FINISH		
DWN.	APP'D	DATE 10/18/82	SCALE	PART NO. 008-4878	REV.



ITEM	QTY	CENTURI PART NO.	Bill of Materials
23	30	50270003	4" wire ties
22	50"	50151104	Brown wire #18AWG
21	50"	50157004	Violet Black Stripe #18AWG
20 (B)			
19 (B)			
18	58"	50175904	Green White Stripe #18AWG
17	44"	50175404	Green Yellow Stripe #18AWG
16	16"	50175004	Green Black Stripe #18AWG
15	132"	50170904	Black White Stripe #18AWG
14 (B)	93"	50179004	White/Black Stripe #18AWG
13	86	50177704	VIOLET WIRE #18AWG
12	57"	50175504	Green Wire #18AWG
11	39"	50170004	White Wire #18AWG
10	38"	50179904	Black Wire #18AWG
9 (B)	1	50150231	3 PIN RECEPT W/ears & tabs Molex # 03-09-1031
8	9	50150278	Female PINS REEL Molex # 02-09-1116
7 (B)	12	50150277	MALE PINS REEL Molex # 02-09-2116
6	3	50150096	OPEN LUG HOLLINSWORTH # RS-4211628
5	3	50150105	RING LUG HOLLINSWORTH # R4123SB-72
4	1	50150322	2 CKT RECEPT. MOLEX 19-09-1029
3	1	50150260	6 PIN PLUG W/ears Molex # 03-09-2061
2	1	50150262	6 PIN RECEPT W/ears & tabs Molex # 03-09-1061
1	1	50150261	12 PIN PLUG W/ears Molex # 03-09-2122

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY
B		ADDED ITEM 4: CHG'D QTY ITEM 7 & 9 II J11, J3, J2 P1 P10 DELETED TV PWR. 3 & 20	[signature]
A	370-24	ADDED GREEN/WHITE WIRE - 12" AND 1 EA RING LUG # 50150105	JTS

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME: Cabinet Power Harness

MATL'S. | HEAT TREAT. | FINISH

DWN. JAB | APV'D. [signature] | DATE 5-6-81 | SCALE X | PART NO. 370-12-0200 | REV. B

AF 17899A

centuri inc.
Centuri, Inc. • 245 W. 74th Place • Hialeah, Florida 33014
Telephone: 305-558-5200 • Telex: 803694 • ANSB Centuri
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